74. (Amended) The computer program of claim 73, wherein said random-access information table is stored on said recording medium as a file separately from said video data.

75. (Amended) The computer program of claim 73, wherein said addresses are indicative of an address on said recording medium corresponding to one of said random-access points.

76. (Amended) The computer program of claim 73, wherein said addresses include a time stamp indicative of a recording time corresponding to at least one of said random-access points.

77. (Amended) The computer program of claim 73, wherein said transport stream is defined by an MPEG standard.
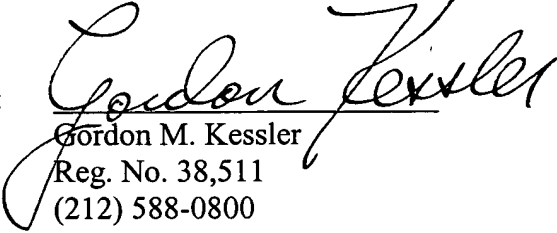
REMARKS

Claims 1-78 remain in the application. Claims 1-4, 6-9, 11-28, 30-33, 35-71 and 73-77 been amended. Attached hereto is a marked up version of the changes made to claims 1-4, 6-9, 11-28, 30-33, 35-71 and 73-77 by the current amendment. The attached pages are captioned **"Version with markings to show changes made."** The filing fee has been calculated based upon the amendments to the claims.

Respectfully submitted,

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00105973

"Version with Markings to Show Changes Made"

<u>IN THE CLAIMS:</u>

Claims 1-4, 6-9, 11-28, 30-33, 35-71 and 73-77 have been amended as follows:

1.   (Amended) A recording apparatus for recording [a] <u>video</u> data [stream including] <u>acquired from a transport stream that includes</u> one or more packetized video <u>data</u> streams, <u>each having packet identification information, said recording apparatus</u> comprising:

detection means for detecting [a] <u>at least one</u> random-access point of said <u>one of said one or more packetized video</u> data [stream] <u>streams;</u>

[obtaining] <u>analyzing</u> means for obtaining an address of said random-access point <u>and for distinguishing packets having said random-access point in accordance with packet identification information included in said one or more packetized video data streams;</u>

[distinguishing means for distinguishing a packet having said address according to packet identification information included in said one or more packetized video streams;]

data-base creation means for creating a data base including [said address and] <u>one or more lists of addresses of said random access point for each of</u> said packet identification information<u>, whereby the lists of random-access points are distinguished from each other by the packet identification information</u>; and

recording means for recording said data base separately from said <u>video</u> data [stream] on a recording medium.

2.   (Amended) The recording apparatus of claim 1, wherein said detection means detects [a] <u>said at least one</u> random-access point according to a video sequence_header_code in said <u>video</u> data [stream].
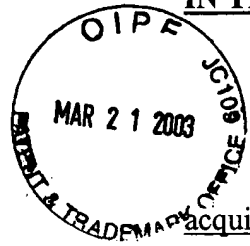
3. (Amended) The recording apparatus of claim 1, further comprising:

extraction means for extracting playback time information from said one or more packetized video data streams; and

wherein said data-base creation means creates a data base of said playback time information and said packet identification information.

4. (Amended) The recording apparatus of claim 1, wherein said [distinguishing] analyzing means distinguishes programs according to a program map table.

6. (Amended) A method for recording [a] video data [stream including] acquired from a transport stream that includes one or more packetized video data streams, each having packet identification information, said recording method comprising the steps of:

detecting [a] at least one random-access point of said one of said one or more packetized video data [stream] streams;

[obtaining] analyzing an address of said random-access point and for distinguishing packets having said random-access point in accordance with packet identification information included in said one or more packetized video data streams;

[distinguishing a packet having said address according to packet identification information included in said one or more packetized video streams;]

creating a data base including [said address and] one or more lists of addresses of said random access point for each of said packet identification information, whereby the lists of random-access points are distinguished from each other by the packet identification information; and

recording said data base separately from said video data [stream] on a recording medium.

7.   (Amended)   The recording method of claim 6, wherein said <u>at least one</u> random-access point is detected according to a video sequence_header_code in said <u>video</u> data [stream].

8.   (Amended)   The recording method of claim 6, further comprising the step of extracting playback time information from said one or more packetized video <u>data</u> streams; and wherein said data-base further includes said playback time information.

9.   (Amended)   The recording method of claim 6, wherein said programs are [distinguished] <u>analyzed</u> according to a program map table.

11.   (Amended)   A reproducing apparatus for reproducing [a] <u>video</u> data [stream] from a <u>transport stream recorded on a</u> recording medium [on which are recorded], <u>said transport stream comprising</u> one or more packetized video <u>data</u> streams<u>, each having packet identification information,</u> and a random-access information table including [positional information indicative of a position of] one or more <u>lists of addresses of</u> random-access points <u>for each of said packet identification information,</u> with a separate random-access information table being generated and stored on said recording medium corresponding to each of one or more video programs, <u>whereby the lists of random access points are distinguished from each other by said packet identification information</u> comprising:

reproducing means for reproducing from said recording medium one or more of said video programs and said corresponding random-access information table; and

control means for controlling, according to said random-access information table, an access point during a random-access playback operation.

12.   (Amended)   The reproducing apparatus of claim 11, further comprising:

selecting means for selecting one or more of said video programs from

video programs included in said <u>video</u> data [stream].

13.   (Amended)   The reproducing apparatus of clam 11, wherein each of said

random-access information tables is stored on said recording medium as a file separately from

said <u>video</u> data [stream].

14.   (Amended)   The reproducing apparatus of claim 11, wherein said

[positional information includes address information] <u>addresses are</u> indicative of an address of

said recording medium corresponding to said one or more random-access points.

15.   (Amended)   The reproducing apparatus of claim 11, wherein said

[positional information includes] <u>addresses include</u> time stamp information indicative of a

playback time corresponding to each of said random-access points.

16.   (Amended)   The reproducing apparatus of claim 11, wherein said [data

stream is composed of a] transport stream <u>is</u> defined by an MPEG standard.

17.   (Amended)   The reproducing apparatus of claim 11, wherein [positional

information is] <u>addresses are</u> formed for each of a plurality of versions of a video program.

18.   (Amended)   A method for reproducing [a] <u>video</u> data [stream] from a

<u>transport stream recorded on a</u> recording medium [on which are recorded] <u>, said transport stream</u>

<u>comprising</u> one or more packetized video <u>data</u> streams, <u>each having packet identification</u>

<u>information</u> and a random-access information table including [positional information indicative

of a position of] one or more <u>lists of addresses of</u> random-access points <u>for each of said packet</u>

<u>identification information</u>, with a separate random-access information table being formed and

stored on said recording medium corresponding to each of one or more video programs <u>whereby</u>

00105973

the lists of random-access points are distinguished from each other by said packet identification information, comprising the steps of:

reproducing from said recording medium one or more of said video programs and said corresponding random-access information table; and

controlling an access point during a random-access playback operation, according to said random-access information table.

19. (Amended) The reproducing method of claim 18, further comprising the step of:

selecting one or more of said video programs from video programs included in said video data [stream].

20. (Amended) The reproducing method of clam 18, wherein each of said random-access information tables is stored on said recording medium as a file separately from said video data [stream].

21. (Amended) The reproducing method of claim 18, wherein said [positional information includes address information] addresses are indicative of an address of said recording medium corresponding to said one or more random-access points.

22. (Amended) The reproducing method of claim 18, wherein said [positional information includes] addresses include time stamp information indicative of a playback time corresponding to each of said random-access points.

23. (Amended) The reproducing method of claim 18, wherein said [data stream is composed of a] transport stream is defined by an MPEG standard.

24. (Amended) The reproducing method of claim 18, further comprising the step of:

00105973

forming [positional information] <u>addresses</u> for each of a plurality of versions of a video program.

25.   (Amended)   A computer program operable to instruct a multi-purpose computer to record [a] <u>video</u> data [stream including] <u>acquired from a transport stream that includes</u> one or more packetized video <u>data</u> streams, <u>each having packet identification information,</u> said computer program comprising instructions of:

detecting [a] <u>at least one</u> random-access point of said <u>one of said one or more packetized video</u> data [stream] <u>streams</u>;

[obtaining] <u>analyzing</u> an address of said random-access point <u>and for distinguishing packets having said random-access point in accordance with packet identification information included in said one or more packetized video data streams</u>;

[distinguishing a packet from said address according to packet identification information included in said one or more packetized video streams;]

creating a data base including [said address and] <u>one or more lists of addresses of said random access point for each of</u> said packet identification information<u>, whereby the lists of random-access points are distinguished from each other by the packet identification information</u>; and

recording said data base separately from said <u>video</u> data stream on a recording medium.

26.   (Amended)   The computer program of claim 25, wherein said <u>at least one</u> random-access point is detected according to a video sequence_header_code in said <u>video</u> data [stream].

27.   (Amended)   The computer program of claim 25, further comprising the instruction of extracting playback time information from said one or more packetized video data streams; and wherein said data-base further includes said playback time information.

28.   (Amended)   The computer program of claim 25, wherein said programs are [distinguished] analyzed according to a program map table.

30.   (Amended)   A recording medium on which is recorded at least one video program formed of [a] video data [stream] comprised of one or more packetized video data streams, each having packet identification information, and a random-access information table including [positional information indicative of a position of] one or more lists of addresses of random-access points for each said packet identification information, with a separate random-access information table being associated with each of said at least one video [programs] program, whereby the lists of random access points are distinguished from each other by said packet identification information, said recording medium being formed by a method comprising the steps of:

detecting [a] at least one random-access point of said video data [stream];

[obtaining] analyzing an address of said random-access point and for distinguishing packets having said random-access point in accordance with packet identification information included in said one or more packetized video data streams;

[distinguishing a packet having said address according to packet identification information included in said one or more packetized video streams;]

creating a data base including [said address and] one or more lists of addresses of said random access points for each of said packet identification information,

whereby the lists of random-access points are distinguished from each other by the packet identification information; and

recording said data base separately from said video data [stream] on said recording medium.

31. (Amended) The recording medium of claim 30, wherein said at least one random-access point is detected according to a video sequence_header_code in said video data [stream].

32. (Amended) The recording medium of claim 30, further comprising extracting playback time information from said one or more packetized video data streams; and wherein said data-base further includes said playback time information.

33. (Amended) The recording medium of claim 30, wherein said programs are [distinguished] analyzed according to a program map table.

35. Apparatus for recording on a recording medium [a] video data [stream that includes] acquired from a transport stream that includes a plurality of multiplexed video programs, each having packet identification information, comprising:

distinguishing means for distinguishing each of said plurality of said video programs;

detecting means for detecting one or more random-access points of one or more of said video programs of said video data;

[obtaining] analyzing means for obtaining [positional information indicative of a position of each of said detected] an address of said random-access points in said video data [stream] and for distinguishing packets having said random-access point in

accordance with said packet identification information included in said one or more video

programs;

generating means for generating one or more lists of addresses of said

random-access points for each of said packet identification information, whereby the lists of

random-access points are distinguished from each other by the packet identification information

[a random-access information table including said positional information for each of said video

programs]; and

recording means for recording said video data [stream] and said random-

access information on said recording medium.

36. (Amended) The apparatus of claim 35, further comprising means for

generating a file that includes said random-access information table separately from a file that

includes said video data [stream].

37. (Amended) The apparatus of claim 35, further comprising selecting

means for selecting one or more of said video programs from said video programs included in

said video data [stream] for playback.

38. (Amended) The apparatus of claim 35, wherein said [positional]

address information includes address information indicative of an address on said recording

medium corresponding to one of said random-access points.

39. (Amended) The apparatus of claim 35, wherein said [positional]

address information includes a time stamp indicative of a recording time corresponding to at

least one of said random-access points.

40. (Amended) The apparatus of claim 35, wherein said [data stream is

composed of a] transport stream is defined by an MPEG standard.

00105973

41.   (Amended)   The apparatus of claim 35, wherein said detecting means detects each of said random-access points according to a corresponding random-access indicator included in a header of each of [a] said plurality of [transport packets] video programs making up said video data [stream].

42.   (Amended)   The apparatus of claim 41, wherein said distinguishing means distinguishes each of said video programs according to [a] said packet identification information included in said video data [stream] and a program map table included in said video data [stream].

43.   (Amended)   The apparatus of claim 35, wherein said distinguishing means further comprises version distinguishing means for distinguishing a plurality of versions of at least one of said plurality of multiplexed video programs from each other; and wherein said generating means generates a random-access information table for each said version.

44.   (Amended)   A method for recording on a recording medium [a] video data [stream that includes] acquired from a transport stream that includes a plurality of multiplexed video programs, each having packet identification information, comprising the steps of:

        distinguishing each of said plurality of said video programs;

        detecting one or more random-access points of one or more of said video programs of said video data;

        [obtaining] analyzing [positional information indicative of a position of each of said detected] an address of said random-access points in said video data [stream] and for distinguishing packets having said random-access point in accordance with said packet identification information included in said one or more video programs;

generating <u>one or more lists of addresses of said random-access points for</u> <u>each of said packet identification information, whereby the lists of random access points are</u> <u>distinguished from each other by the packet identification information</u> [a random-access information table including said positional information for each of said video programs]; and

recording said <u>video</u> data [stream] and said random-access information on said recording medium.

45.   (Amended)   The method of claim 44, further comprising the step of generating a file that includes said random-access information table separately from a file that includes said <u>video</u> data [stream].

46.   (Amended)   The method of claim 44, further comprising the step of selecting one or more of said video programs from said video programs included in said <u>video</u> data [stream] for playback.

47.   (Amended)   The method of claim 44, wherein said [positional] <u>address</u> information includes address information indicative of an address on said recording medium corresponding to one of said random-access points.

48.   (Amended)   The method of claim 44, wherein said [positional] <u>address</u> information includes a time stamp indicative of a recording time corresponding to at least one of said random-access points.

49.   (Amended)   The method of claim 44, wherein said [data stream is composed of a] transport stream <u>is</u> defined by an MPEG standard.

50.   (Amended)   The method of claim 44, wherein each of said random-access points is detected according to a corresponding random-access indicator included in a

header of each of [a] said plurality of [transport packets] video programs comprising said video data [stream].

51.　(Amended)　The method of claim 50, wherein each of said video programs is distinguished according to [a] said packet identification information and a program map table included in said video data [stream].

52.　(Amended)　The method of claim 44, further comprising the steps of:

distinguishing a plurality of versions of one of said multiplexed video programs from each other; and

generating a random-access information table for each said version.

53.　(Amended)　A reproducing apparatus for reproducing [a] video data [stream] from a transport stream recorded on a recording medium [on which are recorded] , said transport stream comprising a plurality of multiplexed video programs, each having packet identification information, and a random-access information table including [positional information indicative of a position of] each of a plurality of lists of addresses of random-access points for each of said packet identification information, wherein a corresponding random-access information table is recorded for each of said video programs, whereby the lists of random-access points are distinguished from each other by said packet identification information, comprising:

reproducing means for reproducing from said recording medium one or more of said video programs and said corresponding random-access information table; and

control means for controlling, according to said random-access information table, an access point during a random-access playback operation.

54.　(Amended)　The reproducing apparatus of claim 53, further comprising:

selecting means for selecting one or more of said video programs from said video programs included in said <u>video</u> data [stream].

55.   (Amended)   The reproducing apparatus of clam 53, wherein each of said random-access information tables is stored on said recording medium as a file separately from said <u>video</u> data [stream].

56.   (Amended)   The reproducing apparatus of claim 53, wherein said [positional information includes address information] <u>addresses are</u> indicative of an address of said recording medium corresponding to one of said random-access points.

57.   (Amended)   The reproducing apparatus of claim 53, wherein said [positional information includes] <u>addresses include</u> a time stamp indicative of a recording time corresponding to each of said random-access points.

58.   (Amended)   The reproducing apparatus of claim 53, wherein said [data stream comprises at least one] transport stream <u>is</u> defined by an MPEG standard.

59.   (Amended)   The reproducing apparatus of claim 53, wherein said [positional information is] <u>addresses are</u> formed for each of a plurality of versions of a video program.

60.   (Amended)   A method for reproducing [a] <u>video</u> data [stream] from a <u>transport stream recorded on a</u> recording medium, [on which are recorded] <u>said transport stream comprising</u> a plurality of multiplexed video <u>data</u> programs, <u>each having packet identification information,</u> and a random-access information table including [positional information indicative of a position of each of] a plurality of <u>lists of addresses of</u> random-access points <u>for each of said packet identification information,</u> wherein a corresponding random-access information table is

00105973

recorded for each of said video programs <u>whereby the lists of random-access points are</u>

<u>distinguished from each other by said packet identification information</u>, comprising the steps of:

        reproducing one or more of said video programs and said corresponding

random-access information table from said recording medium; and

        controlling an access point during a random-access playback operation

according to said random-access information table.

        61.   (Amended)   The method of claim 60, further comprising the step of:

        selecting one or more of said video programs from said video programs

included in said <u>video</u> data [stream].

        62.   (Amended)   The method of clam 60, wherein each of said random-

access information tables is stored on said recording medium as a file separately from said <u>video</u>

data [stream].

        63.   (Amended)   The method of claim 60, wherein said [positional

information includes address information] <u>addresses are</u> indicative of an address of said

recording medium corresponding to one of said random-access points.

        64.   (Amended)   The method of claim 60, wherein said [positional

information includes] <u>addresses include</u> a time stamp indicative of a playback time

corresponding to each of said random-access points.

        65.   (Amended)   The method of claim 60, wherein said [data stream

comprises at least one] transport stream <u>is</u> defined by an MPEG standard.

        66.   (Amended)   The method of claim 60, wherein said [positional

information is] <u>addresses are</u> formed for each of a plurality of versions of a video program.

        67.   (Amended)   A recording medium for storing video data, comprising:

a region for storing [a] data [stream] <u>video from a transport stream</u>

including a plurality of multiplexed video <u>data</u> programs<u>, each having packet identification</u>

<u>information</u>; and

a region for storing one or more random-access information tables

including [positional information indicative of a position of] at least one <u>list of addresses of</u>

random-access [point] <u>points for each of said packet identification information</u>, wherein a

random-access information table is associated with each of said <u>plurality of multiplexed</u> video

programs <u>whereby the lists of random-access points are distinguished from each other by said</u>

<u>packet identification information</u>.

68. (Amended) The recording medium of claim 67, wherein said random-

access information table is stored as a file separately from said <u>video</u> data [stream].

69. (Amended) The recording medium of claim 67, wherein said

[positional information includes address information] <u>addresses are</u> indicative of an address on

said recording medium corresponding to one of said random-access points.

70. (Amended) The recording medium of claim 67, wherein said

[positional information includes] <u>addresses include</u> a time stamp indicative of a playback time

corresponding to at least one of said random-access points.

71. (Amended) The recording medium of claim 67, wherein said [data

stream comprises at least one] transport stream <u>is</u> defined by an MPEG standard.

73. (Amended) A computer program operable to instruct a programmable

processor to store video data to a recording medium having:

00105973

an instruction for storing [a] video data [stream] from a transport stream including a plurality of multiplexed video data programs, each having packet identification information, into a first region of said recording medium; and

an instruction for storing to a second region of said recording medium one or more random-access information tables including [positional information indicative of a position of] at least one list of addresses of random-access [point] points for each of said packet identification information, wherein a random-access information table is associated with each of said plurality of multiplexed video programs whereby the lists of random-access points are distinguished from each other by said packet identification information.

74. (Amended) The computer program of claim 73, wherein said random-access information table is stored on said recording medium as a file separately from said video data [stream].

75. (Amended) The computer program of claim 73, wherein said [positional information includes address information] addresses are indicative of an address on said recording medium corresponding to one of said random-access points.

76. (Amended) The computer program of claim 73, wherein said [positional information includes] addresses include a time stamp indicative of a recording time corresponding to at least one of said random-access points.

77. (Amended) The computer program of claim 73, wherein said [data stream comprises at least one] transport stream is defined by an MPEG standard.